Project Status Report for: October 2001

Project Title: Ultra Low NOx Integrated System for Coal-Fired Power Plants

Project Number: 91890460 **Project Manager:** John Marion

Customer Name: U.S. DOE / Performance Projects **Project Leader:** Charles Maney

GOALS AND OBJECTIVES:

Develop low cost, retrofit NO_x control technologies to address current and anticipated, near term emissions control legislation for existing coal fired utility boilers. Specific goals include:

- Achieve < 0.15 lb/MMBtu NO_x for eastern bituminous coals
- Achieve < 0.10 lb/MMBtu NO_x for western sub-bituminous or lignitic coals
- Achieve economics at least 25% less than SCR-only technology
- Validate NOx control technology through large (15 MWt) pilot scale demonstration
- Evaluate the engineering feasibility and economics for representative plant cases
- Provide input to develop commercial guidelines for specified equipment
- Provide input to develop a commercialization plan for the resultant technologies

WORK PLANNED FROM PREVIOUS REPORT:

Task 1.0 – Test Fuels Characterization

- Complete draft of task report.

Task 2.4 – Advanced Control System Design

- Complete draft of task report.

Task 5 – Engineering Systems Analysis & Economics

- Complete preliminary cases for final economic analysis.

Task 7 – Data Compilation and Final Report

- Continue work on final report.

Task 8 – Project Management

- Obtain a no cost extension from the US DOE for completing the project.

ACCOMPLISHMENTS FOR REPORTING PERIOD:

Task 1.0 – Test Fuels Characterization

- *Begin drafting task report.*

Task report is underway. A couple of tests have still not been completed in the drop tube furnace as the furnace has not been available due to rebuilding / maintenance of the furnace.

Task 2.4 – Advanced Control System Design

- *Complete draft of task report.*

A draft of this task report has been completed.

Task 5 – Engineering Systems Analysis & Economics

- *Complete preliminary cases for final economic analysis.*

The analysis of the unit firing a PRB has been completed. The analysis of the unit firing the midwest bituminous coal is largely completed. The analysis of the unit firing the eastern bituminous coal is not as far along as a few balance of plant costs are still missing.

Task 7 – Data Compilation and Final Report

- *Continue work on final report.*

Final report is underway. Drafts of the introduction and background sections are largely completed and the available task reports have been integrated into the final report.

Task 8 – Project Management

- *Obtain a no cost extension from the US DOE for completing the project.*

A no cost project extension was received from US DOE on October 29, 2001. The project end date was extended to June 30, 2002 and the Global Mixing Process Modeling Task 2.3 was restored to its original scope. Please note, however, that the target end date of the project is March 31, 2002.

WORK PLANNED FOR NEXT REPORTING PERIOD:

Task 1.0 – Test Fuels Characterization

- Complete drop tube furnace testing and draft task report.

Task 2.3 – Global Mixing Process Improvement

- Begin running CFD cases of actual BSF test conditions.

Task 5 – Engineering Systems Analysis & Economics

- Complete preliminary cases for final economic analysis.

Task 7 – Data Compilation and Final Report

- Continue work on final report.